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L12: Entry 1 of 1

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DOCUMENT-IDENTIFIER: US 5724580 A

TITLE: System and method of generating prognosis and therapy reports for coronary health management

US PATENT NO. (1):
5724580Brief Summary Text (8):

A worldwide effort is presently underway to decrease spiraling medical costs. One result of this effort to decrease costs is the increased use of health management organizations. The goal of such organizations is to "filter" all patients through less expensive primary care physicians before a patient is referred to more costly specialists. Thus, the primary care physician necessarily needs to become a broader generalist. At the same time, it is even more critical that the most advanced information pertinent to specific illnesses (such as coronary artery disease) be made available to the primary care physician. Unfortunately, the most common route of coronary therapy utilized by to the primary care physician is simply to refer the patient to a specialist. The primary care physicians is, in general, ill equipped to deliver optimal coronary care and the is no mechanism to educate and assist him/her in the specific management of each unique patient with coronary disease. Thus, it can be appreciated that the prior art does not provide a fast, real-time, effective technique for providing a comprehensive report for the management of coronary patients based on individual signs and risk factors, and which utilizes all known information both of that particular patient and the patient pool in general.

Drawing Description Text (4):

FIG. 2 is a schematic block diagram of the present invention providing for communication between a primary care physician's office, a centralized data management center, and a specialist's office;

Detailed Description Text (4):

Referring next to FIG. 2, once again primary physician's office 120, centralized data management center 122, and specialist's office 124 are illustrated in block format. However, additional components which are implemented when incorporating the present invention are also described. General information such as doctor's ID number, patient's assigned ID number, birth date, sex, height, weight, coronary status, blood pressure, known allergic conditions, cholesterol levels, glucose levels, present drug regimens, smoking habits and exercise regimes are input into a hand-held monitor 132. Monitor 132 is preferably menu driven to insure that the medical personnel at primary physician's office 120 enters all known and required information. Monitor 132 is also capable of storing either real-time ECG information or ECG information which has been stored for the past 24-48 hours. Such information is acquired by connecting monitor 132 to the patient by means of leads 133. Where real-time information is being gathered, it may be desirable under particular circumstances to connect leads 133 to the patient while a stress test is being conducted.

Detailed Description Text (8):

When it is desirable to consult specialist's office 124 before generating the alpha-numeric comprehensive management and prognosis report or when it is necessary to confirm the written report, information can be transmitted either from facsimile

machine 156, via a communication line 160, to a facsimile machine 158, or alternatively, from a modem 162, via communication line 166, to a modem 164. The specialist at office 124 can then review information on a terminal 168, which may simply be displaying data in computer 140, to help establish a comprehensive management and prognosis report or to ensure that a proper report has been generated. If the report is altered in any way, it is desirable that the modified report be transferred back to centralized data management center 122, through either communication line 160 or 166, and then to primary care physician's office 120 through communication line 168. This will ensure that all reports are known at centralized data management center 122. Alternatively, in urgent situations, the cardiologist can call the primary care physician over a communication line 170. Each of the communication lines described herein are typically a standard telephone line.

Detailed Description Text (19):

It will be noted with reference to FIG. 3, that when an "intensify recommendation" message is achieved based upon the algorithm of 8A and 8B, the cardiology consultation service 240 may be contacted. The cardiology consultation service 240 can be located at centralized data management center 122 or at a specialist's office 124. This consultation with a specialist is desirable when ischemia is present for more than 60 minutes based on known research which has validated the presence of ischemia as an accurate predictor of serious coronary events. If the report printed by the algorithm of FIGS. 8A and 8B is deemed accurate by the cardiology consultation service 240, the final report generation routine is run (box 242), and the written report is ultimately sent back to the office of the primary care physician (box 244).

CLAIMS:

1. A system at a centralized data management center for a patient at a remote location, comprising:

means for converting information regarding a condition of said patient into data;

a first telecommunications means for transferring said data to said centralized data management center from said remote location; and

processing means at said centralized data management center for receiving said data and for automatically generating an alpha-numeric comprehensive management and prognosis report including a specific therapy for said patient based on analysis of said data wherein said comprehensive management and prognosis report is indicative of one of a first class wherein said report is non-reflective of a serious medical condition and a second class wherein said report is reflective of a serious medical condition whereby, when report falls within said second class, said data is reviewed and confirmed by a specialist.

9. A method performed at a centralized data management center for a patient at a remote location, comprising the steps of:

converting information regarding a condition of said patient into data;

transferring said data to said centralized data management center from said location;

generating an alpha-numeric comprehensive management and prognosis report including a specific therapy for said patient at said centralized data management center based on analysis

characterizing said comprehensive management and prognosis report as indicative of one of a first class wherein said report is non-reflective of a serious medical condition and a second class wherein said report is indicative of a serious medical condition; and

forwarding said data to a specialist for review and confirmation when said report falls within said second class.

17. A system at a centralized data management center for a patient at a remote location based on a plurality of health risk factors, said system comprising:

means for establishing data reflective of said health risk factors; and

processing means at said centralized data management center for receiving and interpreting said data and for automatically generating an alpha-numeric comprehensive management and prognosis report including a specific therapy for said patient based on said plurality of health risk factors wherein said comprehensive management and prognosis report is indicative of one of a first class wherein said report is non-reflective of a serious medical condition and a second class wherein said report is reflective of a serious medical condition whereby, when report falls within said second class, said data is reviewed and confirmed by a specialist.

19. A method performed at a centralized data management center for a patient at a remote location based on a plurality of health risk factors, said method comprising the steps of:

establishing data reflective of said health risk factors;

processing said data at said centralized data management center;

generating an alpha-numeric comprehensive management and prognosis report including a specific therapy for said patient by selecting stored written messages based on said processing step:

characterizing said comprehensive management and prognosis report as indicative of one of a first class wherein said report is non-reflective of a serious medical condition and a second class wherein said report is indicative of a serious medical condition; and

forwarding said data to a specialist for review and confirmation when said report falls within said second class.

23. A system of disease risk stratification performed at a centralized data management center for a patient located at a first remote location into a first class whose medical condition requires consultation with a specialist located at a second remote location and a second class whose medical condition can be treated without consultation of said specialist, said system comprising:

first telecommunication means at said centralized data management center for receiving data representative of a condition of said patient from said first remote location;

processing means at said centralized data management center for interpreting said data and for automatically generating a comprehensive management and prognosis report for determining whether said data reflects whether said patient falls within said first class or said second class of individuals;

storage means at said centralized data management center providing diagnostic and treatment alpha-numeric messages to said first remote location when said patient falls within said second class; and

forwarding said data to said second remote location for interpretation by said specialist when said patient falls within said first class.

24. A method of disease risk stratification performed at a centralized data management center for a patient located at a first remote location into a first class whose medical condition requires consultation with a specialist located at a second remote location and a second class whose medical condition can be treated without consultation of said specialist, said system comprising:

receiving data representative of a condition of said patient from said first remote location;

automatically generating a comprehensive management and prognosis report for determining whether said data reflects whether said patient falls within said first class or said second class of individuals;

providing diagnostic and treatment alpha-numeric messages to said first remote location when said patient falls within said second class; and

forwarding said data to said second remote location for interpretation by said specialist when said patient falls within said first class.